

Work Order ID 73867

Friday, September 16, 2011 2:32:34 PM

Page 1

Item ID: D2600-5-080

Accept

Setup Start

Revision ID:

Stop

Item Name: Extrusion 'I Beam' thin

Start Date: 9/16/2011 Start Qty: 180.00

Cust Item ID:

Required Date: 10/7/2011 Req'd Qty: 180.00

Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center ID

Operation
Description

Set Up/
Run Hours

Tool ID

Tool #

Plan
Code

Accept
Qty

Reject
Qty

Reject
Number

Insp.
Stamp

Draw Nbr

Revision Nbr

D2600

Rev D1

100

0.00



PURCHASING

Purchasing

Memo

0.00

Purchasing

Issue P/O: 14915 ☐ a) Extrude as per Dwg D2600 ☐ b) Material: 6061-T6 (QQ-A-200/8) ☐ c) Minimum yield tensile strength = 35 ksi ☐ d) Minimum ultimate tensile strength = 40 ksi ☐ e) Minimum elongation = 8% ☐ f) Order at 108" long ☐ g) Caradon Indalex Tool # M

11-09-14
(150)

110

Receive & Inspect for Damage & Mat'l Certs

0.00



Packaging

Memo

0.00

Packaging

Ensure certification is attached

11/10/12 (286)

120

QC6- Inspect dimensions to drawing

0.00



QC

Memo

0.00

Quality Control

2-Check Pull test per Dwg D2600 for compliance page attached. 3-Check hardness with Webster tester

Sum 13

Ph →
~~150~~
~~150~~

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

W/O: 173867		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: D2600-5-080 PAR #: 10/A Fault Category: Engg Draw NCR: Yes No DQA: 10 Date: 11-10-18
 11-902 Resolution: Use as is Disposition: Use as is QA: N/C Closed: cf Date: 11/10/18

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			
11.10.13	110	Dim 2.810 measures 2.768 2.670 measures 2.635 0.070 measures 0.068 RC: process	<u>CP</u> 11.10.13 <u>PS1042</u>	SEE ATTACHED EMAIL & dwg. Acceptable dims are: 2.778 \pm 0.024 2.638 \pm 0.024 0.070 \pm 0.010 respectively Acceptable.	<u>CP</u> 11.10.13	<u>S</u> 11/10/13	<u>CP</u> 11.10.13 <u>PS1042</u>	<u>S</u> 11/10/13

NOTE: Date & initial all entries

No. D'OFFRE
PROPOSAL No. **M18871**

									STANDARD TOLERANCES TO FIVE FIGURE DIMENSIONS UNLESS OTHERWISE SPECIFIED							
E.TABLI AREA	PO ² IN 2		278.82 MM 2		PER. EXT. OUT PER.		PO IN		MM							
E.TABLI VEIGHT	LBS/ PI-FT		0.759 KG/M		FACTEUR FACTOR		20									
E.TABLI ER.	PO IN		256.01 MM		C.C.D.		IN/PO		76.85 MM							
E.IE PAR BY	VERIFIE PAR CHECKED BY			ECHELLE SCALE			1:1		DATE 98,02,16							
E.E. S.	C.A.V.	GRANDEUR DIE SIZE		P.K.T.	L.P.P.	BACKER	GRANDEUR SIZE		BACKER No.							
	I	9X1 1/2		1/2		9x4	11312									
R	ALLIAGE ET TREMPAGE ALLOY AND TEMPER				FACTEUR D'EXTRUSION EXTRUSION RATIO		SHIM NO.		BOLSTER No.							
T	6061-T6				97				NSH 2x5		DATE	SYM.	REVISIONS		PAR BY	

Chris Provencal

From: Chris Provencal <cprovencal@dartaero.com>
Sent: Thursday, October 13, 2011 9:18 AM
To: 'Linda Lacelle'; 'Eric Downing'
Cc: Bill Beckett
Subject: RE: D2600-5 webs

We've always had the issue that our D-part dwgs don't match the Caradon die dwgs (ever since I've been here). Basically, considering the tolerance of the extrusion process, they changed some of the dims to ensure the parts will always fit. We corrected the dwg for D2500 last year, but never the D2600 extrusion.

Based on the D2600 die dwg, the dimension we've agreed to is 2.778+/-0.024. The pieces therefore are acceptable. I will provide a marked up dwg to inspect to for now, and I will have a CAR/PAR created to revise the D2600 dwg.

-Chris

From: Linda Lacelle [mailto:llacelle@dartaero.com]
Sent: Thursday, October 13, 2011 7:09 AM
To: 'Eric Downing'; 'Chris Provencal'
Subject: RE: D2600-5 webs

Chris, please come check them out asap...

Thx

Linda

From: Eric Downing [mailto:edowning@dartaero.com]
Sent: October-13-11 6:31 AM
To: Linda Lacelle; Chris Provencal
Subject: D2600-5 webs
Importance: High

Linda your webs are too small!

They should measure 2.810" they measure 2.768". should be 6.670" and they are 2.635" they rest are good.

Chris is this acceptable? Linda needs them to continue with the big order of D206 skids!

Eric Downing
QC COORDINATOR
DART AEROSPACE
EDOWNING@DARTAERO.COM

Work Order ID 73867

Friday, September 16, 2011 2:32:34 PM



Page 2

Item ID: D2600-5-080

Accept



Setup Start



Revision ID:

Stop



Item Name: Extrusion 'I Beam' thin

Start Date: 9/16/2011 Start Qty: 180.00



Cust Item ID:

Required Date: 10/7/2011 Req'd Qty: 180.00



Customer:

Reference:

Approvals:

Process Plan:

Date:

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/
Work Center IDOperation
DescriptionSet Up/
Run Hours

Tool ID

Tool #

Plan
CodeAccept
QtyReject
QtyReject
NumberInsp.
Stamp

130

Identify as per dwg & Stock Location: _____

0.00



Packaging

Memo

0.00

Packaging



11-10-12

140

QC21- Final Inspection - Work Order Release

0.00



QC

Memo

0.00

Quality Control

w/10/17
ME 11-10-14

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

Picklist Print

Friday, September 16, 2011 2:32:32 PM

Page 1

Work Order ID: 73867



Parent Item: D2600-5-080



Parent Item Name: Extrusion 'I Beam' thin



Start Date: 9/16/2011

Required Date: 10/7/2011

Start Qty: 180.00

Required Qty: 180.00

Comments: IPP ☐ F ☐ 02.09.10 ☐ Added DSK 066 ☐ KJ/RF ☐

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-5-080P  Extrusion 'I Beam' thin		Purchased	No				Each	0.0000		180			

Per 11/12 (180)

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: _____ PAR #: _____ Fault Category: _____ NCR: Yes No DQA: _____ Date: _____

Resolution: _____ Disposition: _____ QA: N/C Closed: _____ Date: _____

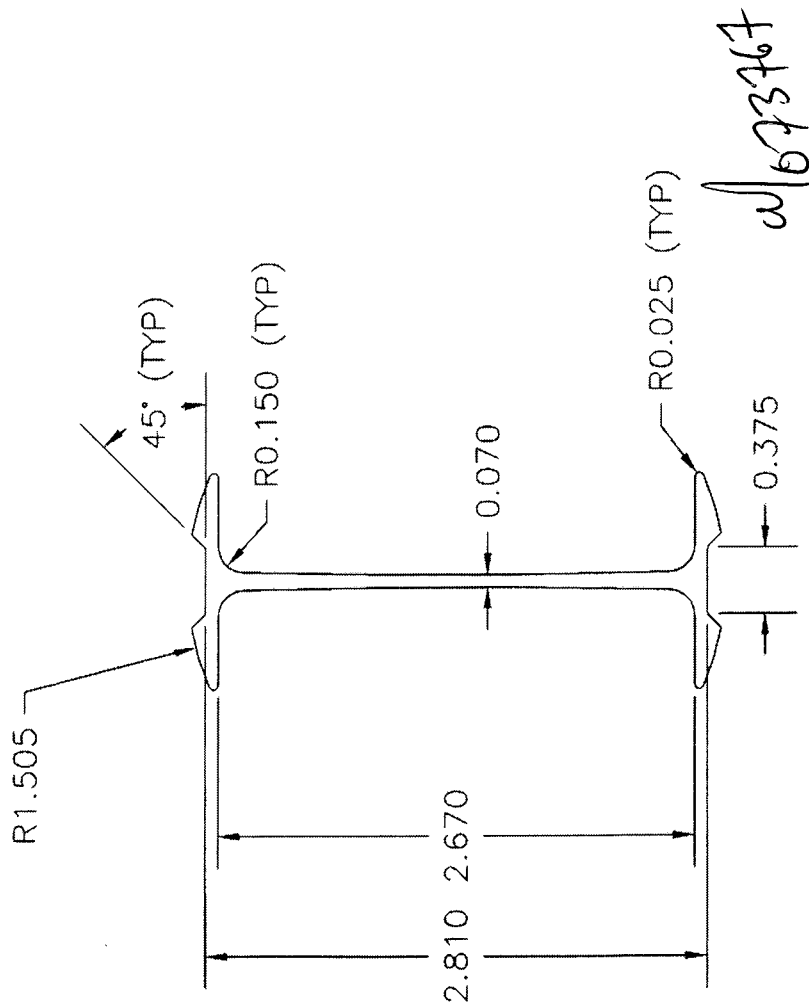
NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

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DESIGN <i>[Signature]</i>	DRAWN BY <i>[Signature]</i>	DART AEROSPACE LTD HAWKESBURY, ONTARIO, CANADA	
CHECKED <i>KE</i>	APPROVED <i>[Signature]</i>	DRAWING NO. D2600	REV. D SHEET 4 OF 5
DATE 98.08.20		TITLE EXTRUSION	SCALE 1:1

RELEASED
98.8.25 DS



D2600-5

MANUFACTURED WITH CARADON INDALOX DIE # MS-18871
PART NUMBER IS D2600-5-XXX WHERE XXX IS CUT LENGTH IN INCHES
(EG. D2600-5-108 IS 108" LONG)





Dart Aerospace Ltd.
1270 Aberdeen Street
Hawkesbury, ON K6A 1K7
Tel: 613 632 9577
Fax: 613 632 1053

PO REPRINT

Purchase Order ID PO14915

Purchase Order Date 9/16/2011

PO Print Date 9/16/2011

Page Number 1 of 1

Order From :

VC-SAP001

SAPA CANADA INC
LOCKBOX B9427
PO BOX 9100
POSTAL STATION F
TORONTO, ONTARIO M4Y 3A5
CANADA

Contact Name

Vendor Phone 800 563 5120

Vendor Fax 800 563 8310

Vendor Account Nbr

Buyer

Brigitte Golden

Requisition Nbr

Tax Resale Nbr 10127-2607

Terms

Net 30

Currency

CAD

FOB

Destination-Collect

Ship To :

DART AEROSPACE LTD

1270 ABERDEEN
HAWKESBURY, ON K6A 1K7
CANADA

Line Nbr	Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable	Req. Qty/ Unit of Measure	Ship Method	Unit Price	Extended Price
1	D2600-5-080P	Extrusion 'I Beam' thin	10/7/2011 Yes	180.00 Each	Yours ppd	\$8.1200	\$1,461.60

Special Inst:

As per DWG: D2600 Rev: D1
B73867

PO Total:

\$1,461.60

10 f 12 f

Change Nbr: 2

Change Date: 9/16/2011

No substitution or deviation without
consent.
Certificate of Conformity or Material
Certification required when applicable

**FEUILLE D'EMPAQUETAGE
PACKING SLIP**

525 rue Avro
Pointe-Claire, QC, Canada H9R 5W3
Téléphone (514) 697-5120
Fac-simile (514) 694-8310

sapa:

Rapport des propriétés mécaniques Mechanical Properties Test Report

Client / Customer : **DART AEROSPACE LTD**
Adresse / Address : **1270 ABERDEEN STREET
HAWKESBURY ONT,
K6A 1K7**

commande Sapa / Sapa order # : **1091088**

bon de commande / Purchase order # : **15-09-2011**

de matrice / Die # : **MS 18871**

Description : **D-2600-5 LIGHT DUTY WEB**

Alliage & trempage / Alloy & temper : **6061 T6**

Customer Part # : **D2600-5**

Contrôle / Control # : **53175-1**

Coulée / Cast # : **52130**

8 u110/13

	Min.requis Min.required	Résultat actuel Actual results
Tension ultime Ultimate stress (psi)	38 000	42,137
Contrainte élastique Yield stress (psi)	35 000	39,044
% élongation dans 2" % elongation in 2"	8	12
Dureté Rockwell E (hre) Rockwell E Hardness (hre)	88 @ 100	93

Composition chimique typique / Typical chemical composition :

	Si	Fe	Cu	Mn	Mg	Cr	Zn	Ti
6063	0,20 - 0,60	0,35 Max	0,10 Max	0,10 Max	0,45 - 0,90	0,10 Max	0,10 Max	0,10 Max
6005	0,60 - 0,90	0,35 Max	0,10 Max	0,10 Max	0,40 - 0,60	0,10 Max	0,10 Max	0,10 Max
6005A	0,68 - 0,72	0,15 - 0,27	0,08 - 0,12	0,20 - 0,24	0,48 - 0,52	0,03 Max	0,05 Max	0,03 Max
6061	0,40 - 0,80	0,70 Max	0,15 - 0,40	0,15 Max	0,80 - 1,20	0,04 - 0,35	0,25 Max	0,15 Max
6351	0,7 - 1,3	0,5 Max	0,10 Max	0,40 - 0,80	0,40 - 0,80	---	0,20 Max	0,20 Max

Nous certifions que le matériel fourni rencontre les exigences chimiques telles qu'annoncées par la norme ASTM B-221-08 excepté pour la section 8.2 (nombre de spécimen).

We hereby certify that the material supplied meets the chemical properties as published by the ASTM B-221-08 except for section 8.2 (number of specimen).

Sincèrement vôtre,
Yours truly,

date : **2011-09-28**



Gilles Pelletier
Technicien de la qualité
Quality technician